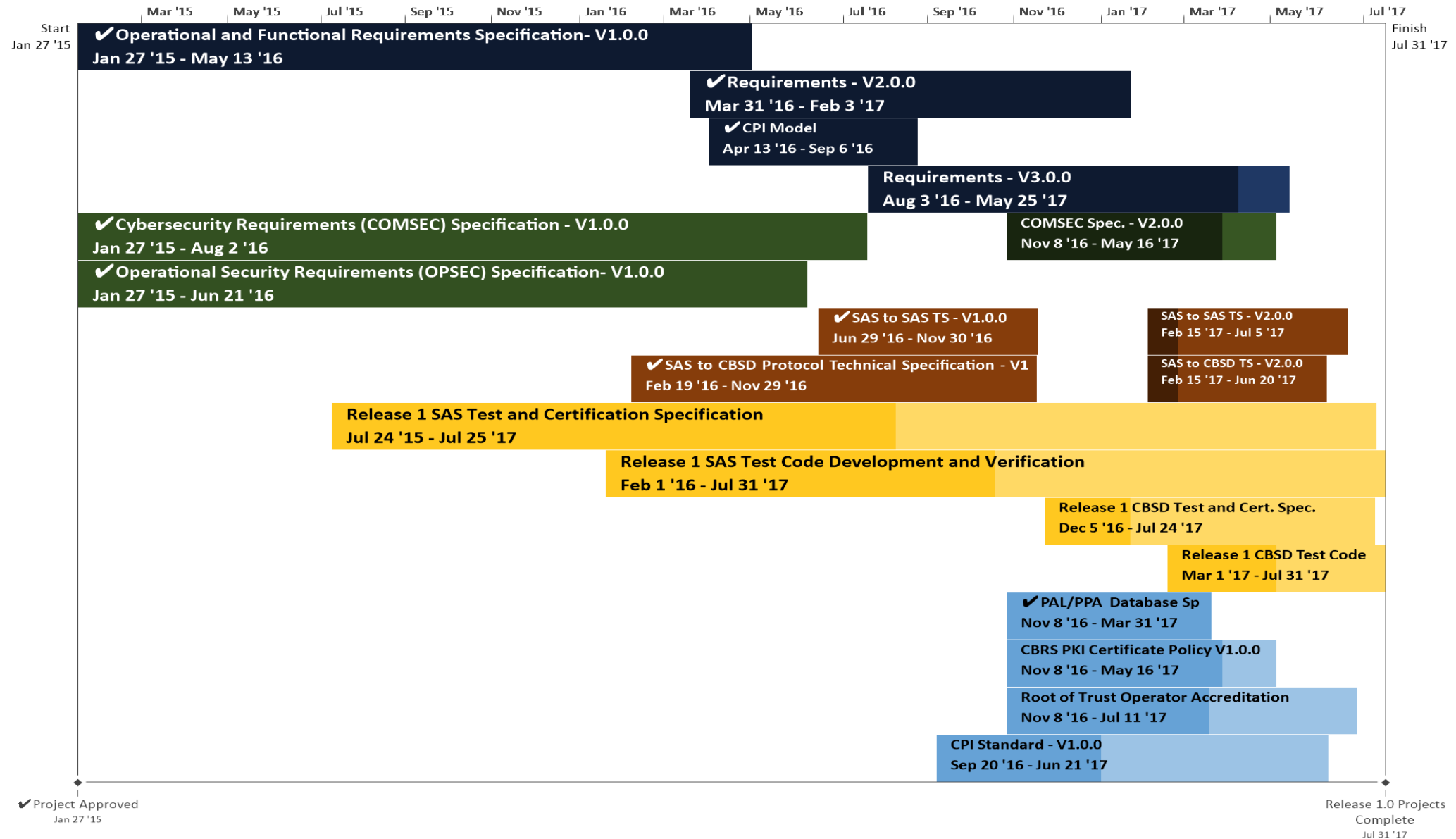# SPECTRUM SHARING COMMITTEE PROJECT ROADMAP

Approved by the Spectrum Sharing Committee Steering Group

3 April 2017

Early Release (Release 0) Publication Timeline

Release 1 Publication Timeline (Revised)

Mar '15 · May '15 · Jul '15 · Sep '15 · Nov '15 · Jan '16 · Mar '16 · May '16 · Jul '16 · Sep '16 · Nov '16 · Jan '17 · Mar '17 · May '17 · Jul '17

Start
Jan 27 '15

Finish
Jul 31 '17

✔ Operational and Functional Requirements Specification- V1.0.0
Jan 27 '15 - May 13 '16

✔ Requirements - V2.0.0
Mar 31 '16 - Feb 3 '17

✔ CPI Model
Apr 13 '16 - Sep 6 '16

Requirements - V3.0.0
Aug 3 '16 - May 25 '17

✔ Cybersecurity Requirements (COMSEC) Specification - V1.0.0
Jan 27 '15 - Aug 2 '16

COMSEC Spec. - V2.0.0
Nov 8 '16 - May 16 '17

✔ Operational Security Requirements (OPSEC) Specification- V1.0.0
Jan 27 '15 - Jun 21 '16

✔ SAS to SAS TS - V1.0.0
Jun 29 '16 - Nov 30 '16

SAS to SAS TS - V2.0.0
Feb 15 '17 - Jul 5 '17

✔ SAS to CBSD Protocol Technical Specification - V1
Feb 19 '16 - Nov 29 '16

SAS to CBSD TS - V2.0.0
Feb 15 '17 - Jun 20 '17

Release 1 SAS Test and Certification Specification
Jul 24 '15 - Jul 25 '17

Release 1 SAS Test Code Development and Verification
Feb 1 '16 - Jul 31 '17

Release 1 CBSD Test and Cert. Spec.
Dec 5 '16 - Jul 24 '17

Release 1 CBSD Test Code
Mar 1 '17 - Jul 31 '17

✔ PAL/PPA Database Sp
Nov 8 '16 - Mar 31 '17

CBRS PKI Certificate Policy V1.0.0
Nov 8 '16 - May 16 '17

Root of Trust Operator Accreditation
Nov 8 '16 - Jul 11 '17

CPI Standard - V1.0.0
Sep 20 '16 - Jun 21 '17

✔ Project Approved
Jan 27 '15

Release 1.0 Projects
Complete
Jul 31 '17

Standards That Comprise Release 1

WINNF-15-S-0112-V3.0.0 Operational and Functional Requirements

WINNF-15-S-0065-V2.0.0 CBRS Communications Security Technical Specification

WINNF-15-S-0071-V1.0.0 CBRS Operational Security Technical Specification

WINNF-16-S-0016-V2.0.0 SAS to CBSD Protocol Specification

WINNF-16-S-0096-V2.0.0 SAS to SAS Protocol Specification

WINNF-16-S-0061-V1.0.0 SAS Test and Certification Specification

WINNF-17-S-XXXX-V1.0.0 CBSD Test and Certification Specification

WINNF-16-S-0245-V1.0.0 PAL Database Specification

WINNF-17-S-0022-V1.0.0 CBRS PKI Certificate Policy

WINNF-16-S-0247-V1.0.0 CPI Standard

Release 1 Schedule Assumptions (1 of 2)

Category B ESC requirements will be supplied by FCC and DoD by 21 April

- ESC requirements are needed for treatment of Category B CBDSs for Release 1 requirements (i.e., Version 3 of the requirements document)
- ESC requirements are needed treatment of Category A (at least) CBSDs in Coastal Exclusion Zones for Release 1.
- Release 1 requirements are being balloted now, and will likely be re-balloted (once) beginning in the next ~2-3 weeks, with the final version available by late May.

If Category B and ESC requirements are not received by 21 April, completion of Release 1 requirements will be delayed to the July timeframe, at the earliest.

Any delay in Release 1 requirements will delay WG3 and WG4 specifications. Release 1 project completion will be reached 3 months after the date the required input is received.

By 21 April, FCC will provide documentation on data sources that include FSS TT&C identifiers, GWBL protection zones, FCC ID access, information on interactions for changes in protection zones and enforcement, and any information on call signs necessary to test with.

- WInnforum test code development needs this input from FCC on these remaining data sources
- Without this data, WInnForum will switch to a plan where such cert testing will be on the basis of affirmation from SAS administrators.

Border Area Management

- Requirements on Implementing international agreements to protect Canada and Mexico

CBSD Measurement Reporting

- Initial requirements for CBSD measurements of their local interference environment, and reporting those data back to the SAS.

CBSD Registration Processing

- The requirements for how a CBSD registers with a SAS, including owner registration, professional installer registration and CBSD registration.

Communications Security

- The communications security policies governing SAS and CBSD communications interfaces.

Certificate Authority Accreditation Standard

Certified Professional Installer Database

- Database containing certified professional installer credentials

Domain Proxy

- The baseline Operational and Functional Requirements of the CBRS Domain Proxy for initial testing and trials.

Environmental Sensing Capability (ESC)

- The requirements for implementation of an Environment Sensing Capability, and protecting federal incumbents.

Exception Management

- The requirements for how trouble tickets or exceptions are managed, including from FCC input, reports from incumbents, and reports from PAL.

FSS Protection

Grandfathered Wireless Device Protection

Operations Security

- The overall system operational security requirements to include handling of incumbent data, obfuscation of spectrum data, and processes associated with auditing and governance of the SAS infrastructure.

PAL Protection Area Definition

- Requirements on how PALs reports their coverage area to the SAS for end-to-end use of the licenses. This includes how PAL licensees define PAL Protection Areas (PPAs), request to operate in a particular geographic area within their license boundary (PPA), how PPA credentials and IDs are defined, conveyed and managed, and how the SAS accomplishes such protections.

Protocol Support for Priority Access Licensing

Propagation Modeling

- Identify appropriate 3.5 GHz propagation models for Incumbent and PAL protection and PPA definition, determine relative benefits and limitations, develop agreement on baseline needs such as underlying data, and define standardized interference aggregation methodologies.

SAS to SAS Information Sharing

- Initial support for SAS-SAS Synchronization and Information exchange.

Spectrum Grant Request Processing

- The requirements for how a CBSD requests and relinquish grants, and how grants are reassigned or terminated.

Issue Management and Change Requests

Following the release of revision 1 specifications, change requests will be collected from the Forum's [public issues management portal](#)

Release 2 Publication Timeline

Operational and Functional Requirements - V4.0.0
Jul 12 '16 - Aug 25 '17

Finish Jan 22 '18

SAS to SAS Protocol Specification - V3.0.0
Nov 3 '16 - Sep 28 '17

SAS to CBSD Protocol Specification - V3.0.0
Dec 8 '16 - Oct 20 '17

Test and Cert Specs - V2.0.0
Aug 1 '17 - Jan 22 '18

WG5 Projects (Details TBD)
Aug 5 '16 - Nov 2 '17
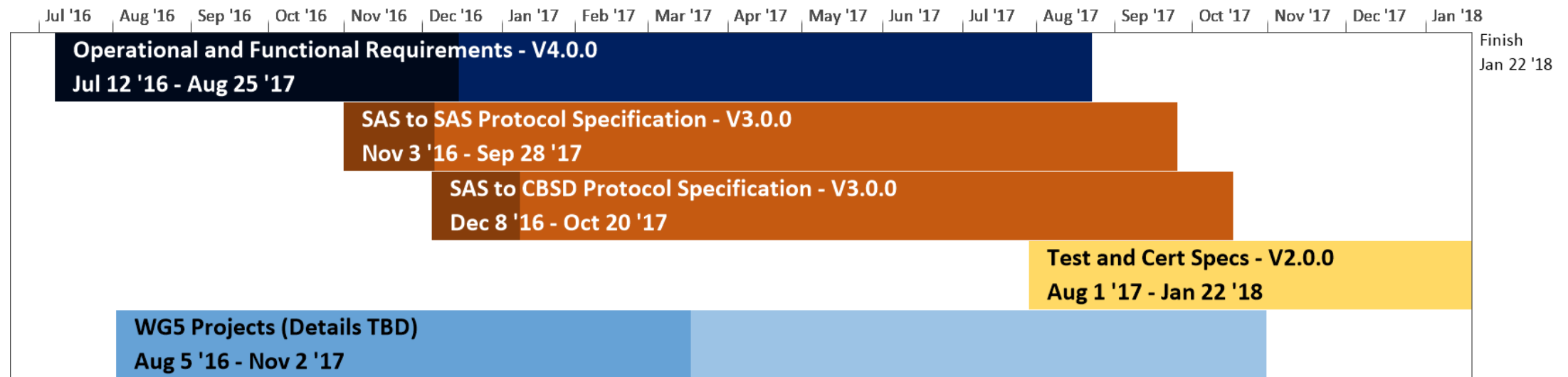
What will be addressed in Release 2

Certified Professional Installer Accreditation Standard
- Guidelines for adoption of uniform industry working standards and curriculum required to be consistent with the protection of spectrum, both licensed and GAA, for sharing in the 3550-3700 MHz band.

CBSD to CBSD Operation

Channel Assignment Optimization
- Full support of WInnForum requirements on how spectrum is assigned across SASs, including PAL.

GAA Coexistence
- A framework for providing fair shared access to CBRS radio resources while mitigating the negative impacts from multiple signals, possibly across multiple air interface technologies, utilizing overlapping and/or neighboring radio resources. This can be used by other organizations in establishing technology specific coexistence agreements.

PAL Leasing

Standardized Non-protocol Procedures (e.g., owner registration)

WInnForum Test and Certification Accreditation Standard

Enhancements from Release 1